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Dan Martin Scott

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EXAMINER

AMINI, JAVID A

ART UNIT

PAPER NUMBER

2672

DATE MAILED: 03/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/820,557

Applicant(s)

SCOTT ET AL.

Examiner

Javid A. Amini

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☐ Claim(s) \_\_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-12, 14, 15, 21, 22 and 24-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12/8/2005.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

***Response to Arguments***

Applicant's arguments filed 12/08/2005 have been fully considered but they are not persuasive.

Examiner's note: The rejection under 35 U.S.C. 112, first paragraph has been withdrawn.

Applicant on page 8 regarding claims 1-6, 8-12, 14-15, 21-22 and 24-27 rejected under 35 U.S.C. 112, second paragraph, argues that the claims meet the requirement of 35 U.S.C. 112, second paragraph.

Examiner's reply: Applicant does not respond to the equations raised under rejection of 35 U.S.C. 112, second paragraph on previous office action, see following question:

The omitted elements are:

1. Applicant needs to specify the step of physical position of the two maps, e.g. overlapped, side-by-side and etc.
2. Applicant needs to specify the step of identifying and computing the points are done automatically or manually.
3. The steps of how can users distinguish the points between the raster and Georeferenced maps?

Applicant on page 11 third paragraph argues that Saylor does not suggest a georeferencing function that specifies a relationship between the pixel coordinates of the first map and the geographic coordinates of the second map.

Examiner's reply: Examiner's interpretation: the pixel coordinates is related to XY coordinates, and the geographic coordinates is related to LAT/LON coordinates. If Applicant

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suggests a different interpretation, then Applicant should be included descriptions that overcome the following questions: what are the pixel and geographic coordinates?

Applicant on page 12 line 6 argues that Saylor does not teach relating the X, Y coordinates into the claimed “geographic coordinates” using a georeferencing function. Also Applicant at line 8 argues that Saylor does not suggest at least “automatically computing a georeferencing function that specifies a relationship between the pixel coordinates of the first map and the geographic coordinates of the second map”.

Examiner’s reply: Saylor in fig. 2 step 36 suggests the conversion of Latitude/Longitude (i.e. geographic coordinates) into X, Y coordinates, i.e. clear teaching of association between Latitude/Longitude, and X, Y coordinates. Saylor at col. 5, lines 33-35 teaches that this operation can be accomplished or, if desired, software can be used to automate the process.

Applicant on page 12 lines 11-21 argues that Saylor uses rectification process manually “eyeballing” the raster image to the vector image and not automatically.

Examiner’s reply: Saylor at col. 5, lines 42-58 teaches, if greater accuracy is required, commercially available software can be purchased which will assist in automated rectification of the raster map relative to the vector map. Again, use of rectification software depends upon the particular degree of accuracy required by a given utility company.

*Id.*, Applicant on page 13 second paragraph argues that Saylor does not suggest “automatically computing a georeferencing function that specifies a relationship between the pixel coordinates of the first map and the geographic coordinates of the second map”.

Examiner’s reply: Saylor in fig. 2 step 36 suggests the conversion of Latitude/Longitude (i.e. geographic coordinates) into X, Y coordinates, i.e. clear teaching of association between

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Latitude/Longitude, and X, Y coordinates. Saylor at col. 5, lines 33-35 teaches that this operation can be accomplished or, if desired, software can be used to automate the process.

Applicant on page 13 last paragraph argues that Saylor converts addresses from LAT/LON (i.e. georeferencing coordinates) into X,Y coordinates.

Examiner's reply: Examiner agrees with Applicant argument that Saylor converts addresses from LAT/LON (i.e. georeferencing coordinates) into X,Y coordinates. However, this is similar to what Applicant claims as "...a georeferencing function that specifies a relationship between the pixel coordinates of the first map and the geographic coordinates of the second map". By referencing to fig. 2 step 36 the function of (x, y) is equal to Latitude/Longitude. Saylor does not show, but it can be written as  $f(x,y) = (\text{Latitude}, \text{Longitude})$ .

Applicant on page 14 first paragraph repeated the previous arguments.

Applicant on page 14 second paragraph argues that Moore does not "automatically computing a georeferencing function that specifies a relationship between the pixel coordinates of the first map and the geographic coordinates of the second map".

Examiner's reply: Moore does not explicitly specify the claimed language, however, in fig. 12 specifies the map image size X and Y coordinates as number of pixels (i.e. width, height). In fig. 16 receiving the geocode (i.e. Latitude and Longitude) that matches e.g., the location of an object e.g., a truck, as illustrated in fig. 10. Therefore, the calculation, matching, and queries are done programmatically i.e. operated with minimal human intervention (automatic).

Applicant on page 15 argues similar to the previous argument.

Applicant on page 15 second paragraph argues that the Examiner has not established a prima facie case of obviousness.

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Examiner's reply: *id.*, Moore does not explicitly specify the claimed language, however, in fig. 12 specifies the map image size X and Y coordinates as number of pixels (i.e. width, height). In fig. 16 receiving the geocode (i.e. Latitude and Longitude) that matches e.g., the location of an object e.g., a truck, as illustrated in fig. 10. Therefore, the calculation, matching, and queries are done programmatically i.e. operated with minimal human intervention (automatic). The motivation combining the two prior arts is as follows: it would have been obvious to a person skill in the art to incorporate also desirable to provide the Moore's GPS based object locating system into Saylor's fig. 2 step 34 to streamline operation of a utility's coordination center, and providing multiple bits of information concerning each monitored object at a low cost in terms of use, system equipment, installation, etc.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-6, 8-12, 14-15, 21-22 and 24-27 rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are:

4. Applicant needs to specify the step of physical position of the two maps, e.g. overlapped, side-by-side and etc.
5. Applicant needs to specify the step of identifying and computing the points are done automatically or manually.

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6. The steps of how can users distinguish the points between the raster and Georeferenced maps?

Examiner's note: Applicant does not use explicitly the terms "first and second maps" in the specification, but uses "MAP1 and MAP2.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6, 8-12, 14-15, 21-22 and 24-27 rejected under 35 U.S.C. 103(a) as being unpatentable over Saylor et al. (hereinafter refers as Saylor), and further in view of Moore.

1. Claim 1,

As per claim 1 "A method of georeferencing a raster map, comprising: Saylor in col. 2 lines 26-47 discloses the limitations for generating method that include the steps of: obtaining a raster image of the existing map; providing a vector database having information characteristic to the territory represented by the rasterized map; displaying a vector map from the vector database, the displayed vector map containing information characteristic to the territory depicted in the rasterized map; substantially aligning corresponding areas of the raster map and the vector map; geocoding the object database information with X,Y coordinates relative to the vector database, at least some of the X,Y coordinates identifying locations of addresses within the territory depicted by the aligned raster and vector maps, also see fig. 2. The following step of "displaying a first map in one area of a display, said first map being a digital raster map", Saylor in fig. 2

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boxes 34 and 30 illustrates two separate maps. The step of “displaying a second map in a second area of the display, the second map being a georeferenced map that displays at least a portion of an identical geographic region displayed in the raster map;”

Saylor in col. 7, lines 9-14 teaches the particular location along the vector of the subject address can be readily determined by one skilled in the art using point/slope geometry. The limitation of “receiving a first point on the first map; receiving a corresponding first point on the second map; receiving a second point on the first map; receiving a corresponding second point on the second map”, Saylor in col. 3, lines 8-11 discloses at least some of the X,Y coordinates assigned to the object database information identify addresses within the territory depicted by the aligned raster and vector maps. The following limitation of “receiving a corresponding first point on the second map”, Saylor in fig. 2 illustrates a raster scan and an import vector data. A person skill in the art would have been recognizing box number 30 as scanning maps as a raster map or a vector map, and box number 34 as a digitized map data. Saylor is silent explicitly to the claim language of “receiving a corresponding second point on the second map”. Saylor in fig. 2, box 38 illustrates overlay raster and vector images, when a person skill in the art marks a point in box 38, actually, marking two maps. However, Moore in fig. 6 illustrates clearly the information for the second map i.e. step 16, Longitude and Latitude, see fig. 16. That correlates these two points to corresponding points X and Y coordinate in fig. 10. The steps of “receiving pixel coordinates for the first point on the first man and the second point on the first map; receiving geographic coordinates for the first point on the second map and the second point on the second map’. Saylor in col. 2 lines, 49-61 teaches a raster map and the X,Y object database coordinates in a database for subsequent selective display. Using this prestored information, a



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method for displaying a serviceable event on a rasterized image of a utility network distribution map is also provided. This displaying technique includes the steps of: receiving a customer service call and identifying an address associated with the serviceable event; identifying from the restored database the X,Y coordinates of the address associated with the serviceable event; and displaying the appropriate raster map and a graphical representation of the serviceable event using the X,Y coordinates of the event address. The last step of the claim is "computing a georeferencing function for the first map in accordance with a relationship between the pixel coordinates of the first map and the geographic coordinates of the second map", Saylor in col. 4, lines 7-19 teaches besides raster/vector overlaying capabilities, this multi/simultaneous user software includes CAD capabilities to create nested drawings and maps with graphical tools, complete coordinate geometry features to facilitate the designing and inputting of field and map surveying information for highways, waterways, etc., a graphical relations database system for tracking information contained on maps and drawings, information manipulation capabilities including the ability to zoom and pan maps, and an advanced programmers toolkit which allows users with programming experience to customize the software to particular applications using a high level interface language such as Fortran 77. Thus, it would have been obvious at the time the invention was made to one of ordinary skill in the art to input the information obtain from Moore's Geocodes in fig. 16 into Saylor's fig. 2 step 34 to find the X, Y coordinate points. Applicant on page 14, line 2 of the specification specifies that there are four points or more, Examiner's interpretation: it would have been obvious to a person skill in the art to recognize that there are four points, because, (X,Y) coordinates points and (Log. , Lat.) the Georeference points are considered four points. Examiner's comment: Applicant needs to specify the physical

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position of the two maps, e.g. overlapped, side-by-side and etc. Saylor teaches overlay two separate images (see fig. 2, boxes 30 and 34). Also Applicant needs to specify the identifying and computing of the points are done automatically or manually and how can a user distinguish points between the raster and Georeferenced maps?

2. Claim 2,

As per claim 2, The method of claim 1 further comprising receiving a verification that a point on the first map correctly matches geographically with a corresponding point on the second map”, the step would have been obvious to a person skill in the art, because Saylor in fig. 5, steps 76-80 illustrates the step.

3. Claim 3,

As per claim 3, “ The method of claim 1 wherein the first map is a portion of the second map”, the step would have been obvious to a person skill in the art, because Saylor in fig. 2, step 38 illustrates the limitation. Examiner’s comment: Applicant does not specify the first map is a portion of the second map in the specification.

4. Claim 4,

As per claim 4, “the method of claim 1 further comprising assigning a longitude and latitude for at least one of the first point and the second point on the first map based upon the geographic coordinates read for at least one of the first point and the second point on the second map.” the step would have been obvious to a person skill in the art, because Saylor in fig. 2, step 36 illustrates the limitation.

5. Claim 5,

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As per claim 5, “the method of claim 1 wherein at least one of the first point and the second point on the first map has a known longitude and latitude”, the step of known longitude and latitude would have been obvious to a person skill in the art,, according to Saylor in fig. 2, step 36 illustrates the limitation.

6. Claim 6,

As per claim 6, “the method of claim 1 further comprising assigning a geographic coordinates to an additional point received on the first map using the computed georeferencing function.”

Saylor in col. 7, lines 1-17 teaches the limitations.

7. Claim 8,

As per claim 8, “the method of claim 1, further comprising receiving an additional point on the first map and automatically marking a corresponding additional point on the second map as calculated by the computed georeferencing function.” The step would have been obvious to a person skill in the art, because Saylor in fig. 2, step 36 illustrates that the calculation is done automatically.

8. Claim 9,

As per claim 9, “the method of claim 8 further comprising receiving a correction of the additional point marked on the second map.” Saylor in fig. 3, step 62 illustrates rules for the modifications.

9. Claim 10,

As per claim 10, “the method of claim 1 wherein an approximate georeferencing function is predefined.” Saylor in col. 5, lines 34-36 teaches the step of this claim.

10. Claim11,

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The rejection of claim 1 applies to the rejection of claim 11.

11. Claim 12,

As per claim 12, “The computer readable medium of claim 11 wherein the contents of the computer readable medium are also capable of verifying that the point on the first map correctly matches geographically with a corresponding point on the second map”, the step would have been obvious to a person skill in the art, because Saylor in fig. 5, steps 76-80 illustrates the step.

12. Claim 14,

As per claim 14, “wherein the contents of the computer readable medium are also capable of receiving an additional point on the first map and automatically marking a corresponding additional point on the second map as calculated by the computed georeferencing function.” The step would have been obvious to a person skill in the art, because Saylor in fig. 2, step 36 illustrates that the calculation is done automatically.

13. Claim 15,

As per claim 15, “The computer readable medium of claim 11, wherein the contents of the computer readable medium are also capable of assigning a longitude and latitude for at least one of the first point and the second point on the second map.” the step would have been obvious to a person skill in the art, because Saylor in fig. 2, step 36 illustrates the limitation.

14. Claims 21-22, 24-26,

The rejection of claims 1-6 and 8-10 applies to the rejection of claims 21-22, 24-26.

15. Claim 27,

Saylor in fig. 2, step 38 illustrates overlay raster scan and vector images. It would have been obvious to a person skill in the art to have the same scale.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Javid A. Amini whose telephone number is 571-272-7654. The examiner can normally be reached on 8-4pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard A. Hjerpe can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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